REMARKS

In the outstanding Office Action, the Examiner restricted claims 1-10 and rejected claims 1-9. Claims 1 and 5-9 are amended herein, claim 10 is cancelled without prejudice and new claim 11 is added herein. No new matter is presented.

Thus, claims 1, 5-9 and 11 are pending and under consideration. The rejections are traversed below.

EXAMINER INTERVIEW:

Applicants would like to thank the Examiner for taking the time to conduct an Examiner Interview. During the Interview, distinguishing features of the present invention, which are also addressed below, were discussed.

As discussed with the Examiner, Applicants will contact the Examiner within two to three weeks of this filing to address any unclear feature(s) of the present invention. Applicants also respectfully request that the Examiner contact the undersigned if further information or explanation is needed before acting on the case.

ELECTION/RESTRICTION:

At item 2 of the outstanding Office Action, the Examiner indicated that claims 1-9 and claim 10 are directed to distinct inventions. As mentioned above, claim 10 is cancelled herein.

Therefore, withdrawal of the restriction requirement is respectfully requested.

REJECTION UNDER 35 U.S.C. § 102(b):

Claims 1-9 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,452,451 (Akizawa).

The object of Akizawa is a search apparatus which enables an ambiguous and approximate search such as a search setting "don't care" in the searched character string and a one-character error allowable search setting negation conditions in the searched character string (see, col. 8, line 57 through col. 9, line 2). As such, Akizawa uses a parallel comparator to perform parallel and high-speed processing for collation of partial character strings partially taken out of plural character strings (character strings of interest) to be searched for from document data with a character string (character string to be searched) in which the document data is arranged sequentially from a leading character (see, col. 5, lines 40-58). Akizawa further

provides means for setting variable length "don't care" at any position in a partial character string set in the parallel comparator and means for setting a negation condition (see, col. 5, lines 59-62).

Akizawa further includes a parallel comparator in a front stage of finite automaton executing means to perform a leading collation processing and a negation condition flag register is provided in the parallel comparator in addition to a valid flag register to make it possible to set partial character strings which have different word lengths or partial character strings which include "don't care" characters and/or characters having negation conditions (see, col. 25, lines 10-17). That is, Akizawa is directed to providing a degree of freedom for setting a partial character string in the high-speed search using the automaton and realizing an ambiguous search such as a one-character error allowable search or a restrictive search with a higher flexibility.

Akizawa also divides symbol strings of interest into at least two strings at any position and performs a search for the divided strings in a document data using each of the partial strings (see, col. 5, lines 15-25). For example, as shown in FIGS. 17-19, Akizawa divides the character strings to be searched (i.e., character strings that are the object of the search) into partial character strings (see also, FIG. 6 and corresponding text). That is, Akizawa is limited to dividing character strings of interest that form the conditions or objects of a search and does not divide the document data within which the search is conducted.

In contrast, the present invention is directed to a full text search system applying a character string collation method, which searches a large quantity of data over a short period of time using a plurality of search processing apparatuses, and provides a mechanism using which update and addition of the search target data are executed in parallel with the search. This enables a degeneration operation to be conducted rapidly in a situation where a defect exists in any one of the search processing apparatuses.

Independent claim 1, by way of example, recites, "receiving instructions related to locations of search-target character string data and character string search conditions" and "outputting search results responsive to the instructions and at the locations of the search-target character string data accordingly." The claimed full text search system of claim 1 includes, "a search integration unit having search-target character string data divided into a group of character string records and allocated to the plurality of search processing apparatuses... for

executing a search using the group of character string records as a series of individual target data." Independent claims 5-9 also recite similar features.

Independent claim 1 further recites, "temporarily storing new character string records to update the search-target character string data" and "transmitting the new character string records stored in the update temporary memory unit to any one of the search processing apparatuses in advance as a part of the search-target character string data" (see also, independent claims 5-8).

Independent claim 9 further recites, "automatically adding new data to the target data based on at least one request from at least one of the terminals **while** the plurality of search requests are processed" (emphasis added).

Akizawa does not teach or suggest the claimed full text search system and method in each of independent claims 1 and 5-9 that is used for parallel searching a large quantity of data via multiple processing apparatuses using "the group of character string records" (claims 1 and 5-8) and "logically divided regions" (claim 9) as "a series of individual target data."

It is submitted that independent claims 1 and 5-9 are patentable over Akizawa.

For at least the above-mentioned reasons, claims depending from the independent claims are patentably distinguishable over Akizawa. The dependent claims are also independently patentable. For example, as recited in claim 2, the present invention includes "an update result reflection unit in which old records before being updated corresponding to the new records stored in the update temporary memory unit is deleted from the search-target character string data" and "the new records are incorporated into the search-target character string data." Akizawa does not teach or suggest these features of claim 2.

Therefore, withdrawal of the rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,691,109 (Bjornson) and U.S. Patent No. 6,738,779 (Shapira).

Bjornson is directed to partitioning both query sequences and the databases into smaller subsets for dividing a task to members of a group of computers (see, col. 3, lines 60-67), and Shapira is directed to searching multiple strings in parallel based on predetermined substring tables (see, FIG. 1 and corresponding text).

In contrast to Bjornson and Shapira, the present invention executes the search using the search conditions by searching for the conditions within search target data divided according to the search processing apparatuses.

Independent claim 1 recites, "outputting search results responsive to the instructions and at the locations of the search-target character string data accordingly", where search-target character string data is divided into a group of character string records for "executing a search using the group of character string records as a series of individual target data." As mentioned above, independent claims 5-9 also recite similar features.

Bjornson and Shapira, alone or in combination, do not teach or suggest does not teach or suggest the system and method of claims 1 and 5-9 including using "the group of character string records" (claims 1 and 5-8) and "logically divided regions" (claim 9) as "a series of individual target data" and "at the locations of the search-target character sting data."

It is respectfully submitted that independent claims 1 and 5-9 are patentably distinguishable over Bjornson and Shapira.

For at least the above-mentioned reasons, dependent claims of independent claims 1 and 5-9 are patentably distinguishable over Bjornson and Shapira.

Therefore, withdrawal of the rejection is respectfully requested.

NEW CLAIM:

New claim 11 is added herein to emphasize that the present invention includes, "transmitting character string search conditions to each of the search processing apparatuses as search instructions" and "executing searches via the search processing apparatuses using corresponding search target character string data divided according to a number of the search processing apparatuses." Accordingly, the present invention executes the searches are "using said corresponding search target character string data divided as a series of individual target data."

The cited references, alone or in combination, do not teach or suggest executing searches "using corresponding search target character string data divided according to a number of the search processing apparatuses" as "a series of individual target data", as recited in new claim 11.

Therefore, it is respectfully submitted that new claim 11 is patentably distinguishable over the cited references.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: 02/24/2006

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